

AD-A157 142

FEASIBILITY OF AN AMC (ARMY MATERIEL COMMAND)
CONTRACTOR PERFORMANCE HISTORY SYSTEM(U) ARMY
PROCUREMENT RESEARCH OFFICE FORT LEE VA A J HANDLER
MAY 85 APRO-83-09

1/1

UNCLASSIFIED

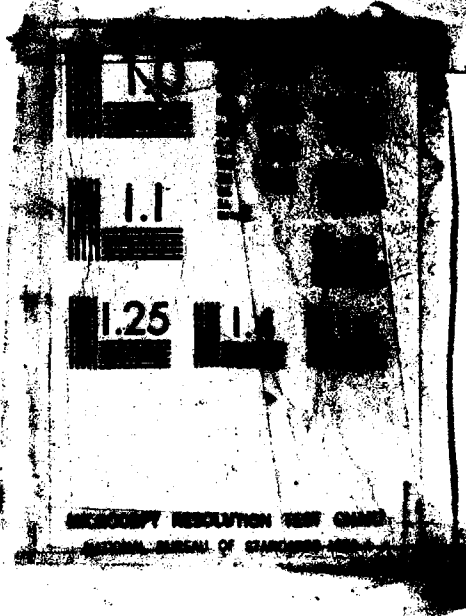
F/G 15/5

NL

END

FILMED

DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AD-A157 142

APRO 83-09
FINAL

FEASIBILITY OF AN AMC
CONTRACTOR PERFORMANCE HISTORY SYSTEM



by

Arthur J. Mandler

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A/	

The pronouns "he," "his," and "him," when used in this publications, represent both the masculine and feminine genders unless otherwise specifically stated.

Information and data contained in this document are based on input available at time of preparation. Because the results may be subject to change, this document should not be construed to represent the official position of the US Army.

Approved for Public Release; Distribution Unlimited

US Army Procurement Research Office
Office of the Deputy Chief of Staff for Logistics
Fort Lee, Virginia 23801-6045

EXECUTIVE SUMMARY

A. PROBLEM. Within the field of defense acquisition it has long been recognized that contracts are sometimes awarded to firms which have histories of poor quality products or late deliveries. It has been hypothesized that the recognized problem is largely due to the absence of contractor performance history systems which could assist decision makers in selecting better qualified contractors.

B. BACKGROUND. The idea of keeping a historical record of contractor performance is not new. A rather complex system, the Contractor Performance Evaluation (CPE) Program, was established in 1963 but ultimately failed due to the data being difficult to understand, cumbersome to use and not sufficiently current.

C. OBJECTIVE. The main objective of this effort was to determine the feasibility of developing and utilizing a AMC Contractor Performance History System as a possible solution to the problem ~~stated above~~. If such a system were deemed feasible, secondary objectives were to provide a system framework and designate the proper organization for system implementation.

D. SCOPE. This feasibility study was to be based upon an examination of three (3) existing quality-oriented history systems. Additionally, data available from the Defense Contract Administration Services (DCAS) and data compiled by the Procurement and Production Directorates of AMC's Major Subordinate Commands (MSC's) were to be considered.

E. CONCLUSIONS AND RECOMMENDATIONS. Establishing a contractor performance history system patterned after an existing Navy quality history system is feasible. Implementation is primarily the responsibility of the AMC Quality Assurance and Test Directorate which is currently considering preliminary actions. While establishment of this system would be useful over the long term, the current systems employed by DCAS and the AMC MSC Procurement and Production Directorates meet the needs of the Army insofar as contract awards are concerned.

Keywords: late deliveries; measurement tools.

TABLE OF CONTENTS

	<u>PAGE</u>
EXECUTIVE SUMMARY	11
 <u>CHAPTER</u>	
I. <u>INTRODUCTION</u>	1
A. Problem	1
B. Background	1
C. Objective	2
D. Scope	3
E. Organization	3
II. <u>PERFORMANCE HISTORY USES AND LIMITATIONS</u>	5
A. System Use	5
B. Responsibility Determination	5
C. Quality History Program	6
III. <u>MEASUREMENT CRITERIA</u>	8
A. Introduction	8
B. Quality	8
C. Delivery	11
D. Summary	14
IV. <u>SELECTED QUALITY HISTORY SYSTEMS</u>	15
A. Introduction	15
B. Systems	15
C. Summary	20
V. <u>PERFORMANCE RECORDS BASED UPON DCAS DATA</u>	21
A. Introduction	21
B. DCAS	21

CHAPTER I

INTRODUCTION

A. PROBLEM.

Within the field of defense acquisition it has long been recognized that contracts are sometimes awarded to firms which have histories of late deliveries and/or poor quality products. Placing defense contracts with such firms is not only bad business practice but also a violation of regulations (DAR 1-900) that require a satisfactory performance record as a prerequisite for award of a contract. It has been hypothesized that the recognized problem is largely due to the absence of contractor performance history systems which could assist decisionmakers in selecting better qualified contractors.

Unfortunately, withholding contract awards for past late deliveries and/or poor quality performance is not always possible, particularly in the case of major systems contractors. It is for this reason that some believe a specialized contractor performance history system for major items contractors is warranted. It is thought that such a system could lead to better quality contractual performance. However, major items systems will not be addressed under this feasibility study which centers on contractor performance history systems for secondary items/spare parts. A follow-on effort concerned with major items will be initiated if deemed appropriate.

B. BACKGROUND.

The idea of keeping a historical record of contractor performance is not new. One previous attempt was the Department of Defense (DOD) Contractor Performance Evaluation (CPE) Program established in 1963. About eight

years later the program was cancelled and a study of the Army's version of CPE was performed. That study, Army Procurement Research Office Report 201, An Analysis of the Army's Contractor Performance Evaluation Program, January 1973, found that the CPE data had been difficult to understand, cumbersome to work with and not sufficiently current. The study concluded that while contractor experience data is essential, the methods to gather and use the data must be straightforward, easy to understand, apply and administer, and use of the data must be flexible. It further concluded that the data must be treated as a management tool only, not a decisionmaking apparatus. This may be the proper time to once again consider the implementation of a contractor performance history system, but the lessons of the past must be considered.

Before embarking on a design for such a system, certain foundations must be built. First, to develop any contractor performance history system it is necessary to create measurement tools that adequately discriminate between good and bad performers. A measurement tool can be defined as a method to rate an individual area of performance, such as product quality. Additionally, specific uses of system data must be determined prior to system development. Furthermore, those uses must be deemed reasonable and consistent with the legal and regulatory requirements placed upon DOD acquisitions.

C. OBJECTIVE.

The main objective of this effort was to determine the feasibility of developing and utilizing a AMC Contractor Performance History System as a possible solution to the problem of continuing to award new contracts to those firms which have poor performance histories. If such a system was deemed feasible, two further objectives were to be met. The first of these

was to provide a conceptual framework for such a system. The second was to determine which organizations should be responsible for refining and developing the concept into a workable system. Any resultant system was to be oriented toward secondary items/spare parts.

D. SCOPE.

After reviewing available literature it was determined that examinations of existing quality-oriented history systems could offer the greatest insights. The Naval Sea System Command (NAVSEA) has been experiencing some degree of success with a system they have been refining during the past eighteen years. Additionally, two AMC Subordinate Commands (AMCCOM and TSARCOM) have recently developed their own systems.

The original scope of this effort specifically excluded examination of the systems employed by the Defense Contract Administration Services (DCAS) of the Defense Logistics Agency (DLA). During an interim briefing of this project, the Director, AMC Procurement and Production Directorate, tasked this office to inquire into the nature and use of past performance data collected by DCAS and the Procurement and Production Directorate of AMC's Major Subordinate Commands (MSC's).

E. ORGANIZATION.

This paper is organized into six chapters. Chapter I is the Introduction which includes background information. Chapter II discusses potential uses and limitations of procurement history data. Chapter III discusses existing measurement tools. Chapter IV provides an overview of the existing quality-oriented systems referred to in the SCOPE and Chapter V presents an overview of DCAS and AMC MSC's attempts to utilize past performance data. Chapter VI

presents APRO conclusions and recommendations and actions proposed and to be performed by the AMC Quality Assurance and Test Directorate.

CHAPTER II

PERFORMANCE HISTORY USES AND LIMITATIONS

A. SYSTEM USE.

Analysis has shown that in the contract award process practical Government use of contractor performance history data is possible in three ways.

- o Withhold contract awards from poor performers per DAR 1-900. (See B. below.)

- o Award with caution if a contract must be placed with a firm known to have a history of problems. Additional surveillance or other controls could be placed on those contracts.

- o Award without concern to those firms with good performance histories. Surveillance could be limited on those contracts.

As discussed in Chapter I, it is necessary to determine the purpose(s) for which a system will be used before the system is designed. The purpose of any system which may be put into use should be to identify poor performing contractors in order to withhold awards or award with caution. In this manner the system can aid in minimizing contractor performance problems.

B. RESPONSIBILITY DETERMINATION.

It was noted above that one use of a performance history system is to withhold contract awards from poor performers. Since DOD acquisitions are highly regulated, it is necessary to discuss the only widely applicable mechanism by which a contract award can be withheld from a poor performer who otherwise would be the successful bidder/offeror. This mechanism is termed the responsibility determination and detail can be found in DAR 1-900.

DAR 1-900 sets minimum standards a contractor must attain to be deemed responsible and therefore eligible for award of a defense contract. Some of those standards concern past performance. One standard requires that a contractor have a satisfactory performance record, including quality. DAR 1-900 provides further guidance on aspects one must consider for a contractor's record to be deemed satisfactory:

- o The contractor must not deliver items with quality defects of a critical or repetitive nature without taking corrective action.

- o The contractor must not be seriously deficient in current contract performance.

- o The contractor must not have past unsatisfactory performance due to failure to apply necessary tenacity and perseverance.

If a contractor does not meet the above criteria he is determined to be non-responsible and cannot receive a contract award. In this manner the Government is prohibited from awarding a contract to a proven poor performer unless the firm is a small business. In that case the Small Business Administration (SBA) retains the right to issue a Certificate of Competency (COC) and thereby overturn a contracting officer's non-responsibility determination. However, just as there should be a reasonable basis for making a non-responsibility determination, SBA should have a reasonable basis for issuing a COC.

C. QUALITY HISTORY PROGRAM.

As noted above, there is legal machinery by which defense contracts can be denied to firms with records of poor performance. If a centralized historical performance file existed, it would seem quite simple to exclude those firms with poor performance histories from receiving new contracts. However,

currently there is not a historical performance file that identifies poor performers. This results in identification and exclusion of poor performers in a random rather than consistent manner.

DOD Directive 4155.1, Quality Program, was issued 10 Aug 78 and it established certain DOD policies and assigned responsibilities. Among those responsibilities was the requirement that DOD components maintain quality history data to attack the problem cited in Section I of this report. Under paragraph 4. of C. POLICY AND OBJECTIVES, the Directive states,

"4. DOD Components shall assure that contracts are not awarded to contractors with a previous history of providing products or services of an unsatisfactory quality. Contractor quality history data shall be maintained and used for this purpose."

It is understood that all AMC QA elements are complying with the historical data requirements. AMCCOM and TSARCOM use automated files, while the other AMC MSC's maintain historical data manually. If the QA elements used the data they collect to identify the poorer performers, then it might be possible to "assure that contracts are not awarded to contractors with a previous history of providing products or services of an unsatisfactory quality." However, there are no active programs which identify poor performers and deny them new contracts.

CHAPTER III

MEASUREMENT CRITERIA

INTRODUCTION.

As noted in Chapter I, the use of measurement tools that adequately discriminate between satisfactory and unsatisfactory performance is necessary. Poor performing contractors are to be identified. The first step in examining measurement tools is to identify those areas of performance that can be objectively measured. Subjective, non-contractual areas of measurement, such as attitude and degree of cooperation, will be excluded. If two contractors can both deliver identical items in the same amount of time under the same Government surveillance conditions, legal conditions dictate that they must be considered equal in terms of relative performance. Also, compliance with non-performance related requirements such as Cost Accounting standards and EEO provisions are to be excluded since, for performance measurement, our concern lies only with actual performance factors. Based upon the above, only two areas of performance lend themselves to objective measurement: quality of product and timeliness of delivery. Quality can be objectively measured by conformance to specifications. Timeliness can be measured by adherence to delivery schedules.

QUALITY.

Measuring quality, or conformance to specifications, can be done prior to Government acceptance or after Government acceptance. If an item is shown not to conform before acceptance, it should not be accepted. A contractor's adherence to in-process quality requirements such as MIL-Q-9858A, Quality Program Requirements, and MIL-I-45208A, Inspection System Requirements, can

2.c. below. Operational details of that program at the Baltimore DCASMA are then presented.

1. Types of Data.

a. Production Schedule Completion Report (PSCR).

(1) This is a DCAS-wide report of completed contracts. Each DCASMA has its own report which covers the contracts over which that DCASMA has cognizance. These ADP reports, which are printed monthly, are retained for one year. For each completed contract, the PSCR shows the following data:

- (a) Scheduled delivery date
- (b) Actual delivery date
- (c) If late, length of delinquency is stratified
- (d) If late, reason for delay
- (e) If late, responsibility for delay (Government, Contractor,

Undetermined)

(2) If a delivery date has been extended, the PSCR shows that an extension had been made, however, the extended delivery date replaces the original date and the reason for the extension is not reported.

(3) As an example, the PSCR can readily show that a particular contractor completed two contracts during the past year. Of those, one contract was completed on schedule and the other was 60 days late due to the Government furnishing defective GFM. Reasons for delays and placement of responsibility are based upon the perceptions of the DCASMA Industrial Specialist.

b. Individual Contract Abstract.

As noted above the PSCR only shows data on completed contracts.

CHAPTER V
PERFORMANCE RECORDS BASED UPON DCAS DATA

A. INTRODUCTION.

As stated in Chapter I, paragraph D. Scope, the Director, AMC Procurement and Production Directorate, tasked APRO to inquire into the nature and uses of past performance data collected by DCAS and the Procurement and Production Directorates of the AMC MSC's. Coordination with DCAS Headquarters at Cameron Station resulted in a field visit to the Baltimore Defense Contract Administration Services Management Area (DCASMA) office. Information on DCAS operations was obtained through personal interviews and data examination. Relevant information on the MSC's collection and use of past performance data was obtained through telephone discussions with cognizant personnel at AMCCOM, CECOM, MICOM, TACOM and TSARCOM.

B. DCAS.

Before discussing the nature and uses of past performance data within DCAS it must be recognized that there are nine (9) distinct DCAS Regional (DCASR) offices. Each DCASR is responsible for a number of DCASMA's. DCASR's report to HQ DCAS at Cameron Station. Not all DCASR's operate identically. Likewise, there may be differences in the methods used by different DCASMA's responsible to the same DCASR. Nonetheless, it is believed that the methods used to gather data and the formats in which the data are reported are common to all DCASMA's even though the uses of the data may vary somewhat from DCASR to DCASR and DCASMA to DCASMA. In the narrative that follows, data uses (as concerns Pre-Award Surveys) should be common to all DCASMA's. An overview of the DCAS Contractor Improvement Program (CIP) is presented in

200-300 of the poorest performers during the past six month period. Through a series of meetings and discussions, with participation from representatives from the purchasing activities, the final VDAR is reduced to 50 firms through comparative analysis techniques. This becomes the semi-annual VDAR. In between the publishing of the VDAR's, bulletins sometimes are issued to add or delete a vendor.

For sole source producers or for contracts awarded in spite of known problems, contractually mandatory, tailored inspection clauses are aimed at the perceived problem area. The PCO tasks QA to develop these clauses. Additionally DCAS may be tasked to put 100% inspection effort into a specified problem area. The manager of this system perceives that, in general, contractors wish to avoid being placed on the VDAR and will normally take reasonable action to improve their performance.

C. SUMMARY.

The main difference between the quality measurement tools available to NAVSEA and AMC is that NAVSEA can use reject rates from receipt inspection records because some critical items are re-inspected before going into stock. Also, where a contractor has a poor performance history and items are to be delivered to the fleet, DCAS may inspect at source but accept at destination. The NAVSEA quality history system can be adapted to AMC needs. However, due to a lack of depot receipt inspections, a AMC system may not be as easy to use as NAVSEA's (when distinguishing between good and poor producers). A system using a comparative analysis method is practicable.

data from the system managers, NMQAO and/or their local representatives. The data file on that contractor must be given consideration before an award is made. The VDAR is not a "go/no go" list; it merely requires that the PCO consider available data in his responsibility determination. The vendors are aware of the VDAR and the Chief, NMQAO believes that some are motivated to upgrade their efforts to either be removed from the VDAR or to avoid being included in the VDAR in the first place.

There are presently about 6000 contractors in the NAVSEA system. Currently, the system is mainly confined to a couple of hundred items considered critical. When an award is made for a critical item, the purchasing activity forwards a copy of that contract to NMQAO for entry into the system. Contracts for non-critical items are not put into the system when an award is made. However, if quality problems are later reported, that information is entered.

Every 6 months a VDAR is developed and disseminated to the purchasing activities. Poor performance alone will not get a vendor placed on the VDAR. When quality problems occur, the responsible firms are notified and are asked to respond by stating the corrective action they intend to take. The data system documents contractor responses. If problems prove to be repetitious or if promises are not met, NMQAO notifies contractors that they are suspected of being poor performers. Contractors are given an opportunity to respond to NMQAO. Once a contractor has been put on notice by NMQAO and fails to overcome the stated problem(s) he becomes a candidate for the VDAR.

Presently, a vendor with 2 or more uncorrected problems in the past 6 months is placed on a preliminary VDAR. NAVSEA recognizes the crude nature of existing measuring tools and uses the best data available to determine

in existence (although changing) for more than 18 years. Unlike the other systems which have the primary function of aiding in resource management, the NAVSEA system's primary function is to collect data and identify contractors with continuing quality problems. The main benefit perceived by the managers of the system is that aspect of the system which motivates an identified poor producer to increase his quality of performance. Unlike the TSARCOM and AMCCOM systems which are oriented toward better contract management in the quality functional area, the NAVSEA system attempts to manage and affect the quality of performance of contractors by motivating them to improve through an implied threat of punishment.

As discussed in Chapter III, there are only three practical uses of contractor performance history data. The one use that could truly motivate a contractor would be the threat (and subsequent action, if necessary) of withholding contract awards if that contractor had a continuing history of poor performance. This is the motivational method that the NAVSEA system employs.

The NAVSEA system is operated by the NAVSEA Material Quality Assessment Office (NMQAO) located at Portsmouth, NH.* The NMQAO collects data from 50-60 naval activities (shipyards, weapons stations, etc.) and then evaluates the data to identify vendors with continuing quality problems. Semi-annually those vendors are included on a list of poor performers which is called the Vendor Data Analysis Report (VDAR). The VDAR is distributed to NAVSEA purchasing activities. If an award is contemplated to a contractor on the VDAR, the Purchasing Contracting Officer (PCO) must request historical

* All the information describing this system was provided through interviews with the Chief, NMQAO.

the system has been operational for only a short time, it provides a foundation for a comparative analysis system to identify problem producers at TSARCOM.

2. AMCCOM System.

AMCCOM also uses a quality-oriented automated history system that was derived from the TSARCOM system. Implemented in January 1983 there has been backloading of some information from contracts awarded as early as 1979. As with the TSARCOM system, this system is perceived mainly as a management aid for placement of QA resources. The developer of the system stated that, based upon historical information in the system, managers can be alerted as to which contractors need additional Government surveillance. The developer believes that prior to system implementation, managers reacted to problems too late. Now some problems can be anticipated. Since this system was derived from the TSARCOM system, the data elements that would allow a comparative analysis of contractors are present. All AMCCOM contracts and purchase orders are entered into this system. There are presently about 10,000 open contracts.

Attempts have been made to numerically rate contractors but, due to the cited problems with measurement tools and some "system bugs," the only purpose this rating serves is to give management a crude indicator of possible poor performance. A low rating does not necessarily mean poor performance and a more thorough analysis of narratives must be done. As with the TSARCOM system, the foundation of a comparative analysis system exists if enough historical data were available.

3. NAVSEA System.

The NAVSEA system, also a quality-oriented automated system, has been

were entered into the system. The main purpose of the system is to aid TSARCOM QA management in resource allocation. A developer of the system explained that the main perceived benefit was providing data that noted scheduled QA actions (plant visits, pre-award surveys, etc.) which allowed the management of travel (TDY) to be performed more efficiently.

Only contracts for critical items (items that could threaten life if they failed) are put into the system. There are presently about 2300 contracts entered into the system. The system is designed in such a way that it can accommodate detailed narratives for a large number of data elements. Some data elements in the TSARCOM system are:

- Preaward Narratives
- First Article Test Results
- Request for Deviation
- Request for Waiver
- Test Narratives
- Rework Quantities
- Variations from TDP
- Trip Reports
- QDR data
- GFM data

While the TSARCOM system in its present configuration has little value as a contract performance measurement tool, it could be altered to be of greater value. If the system were used to identify problem producers through a comparative analysis of contractors, the more historical contract data available the more dependable the results of any analysis. Although

CHAPTER IV

SELECTED QUALITY HISTORY SYSTEMS

A. INTRODUCTION.

One aspect of determining the feasibility of a performance history system was to examine existing measurement tools to understand the degree of accuracy achievable. Additionally, it was necessary to examine existing systems that performed some historical recordkeeping and/or rating functions. Three systems were examined. Two of the systems were Army systems and both those systems appeared to have been designed to aid in managing existing contracts from the perspective of Quality Assurance (QA) personnel. The third system, operated by a Navy purchasing command not only aids QA personnel in managing existing contracts, but also attempts to identify poorly performing contractors. Most of the data for the systems is derived from actions in which local QA personnel participate. These are primarily quality systems and are independent of other functional areas and the Defense Logistics Agency. Time did not permit a detailed examination of Air Force efforts but discussions with a representative of the Office of the Assistant to the Commander for Quality at the Air Force Logistics Command revealed that certain techniques similar in concept to those of the Navy system (described later) were being used. A description of the highlights of the three systems examined follows.

B. SYSTEMS.

1. TSARCOM System.

This quality-oriented automated history system was implemented in January 1982. It required approximately 12 months for the system to gather enough contract data to be useful since few contracts awarded prior to 1982

period can lead to a waiver of the delivery schedule which would then result in the Government losing its right to terminate for default. Likewise, repetitive schedule extensions can prevent the Government from using late deliveries as an administrative means of evaluating poor performance.

4. Effects on Delivery Data.

Policy and legal considerations affect the usefulness (as a measurement tool) of the delivery data put into CCSS. Unless it is possible to redesign the base, the accuracy of the data will remain highly questionable since many deliveries that are truly late will be considered on time.

D. SUMMARY.

The systems that appear to measure quality and delivery were developed for purposes other than keeping historical performance records on defense contractors. As they are presently structured, the QDR system and the CCSS delivery information system cannot be depended upon to provide accurate performance measurement data.

Logistics Agency (DLA) utilizes delinquency rates as one of the tools by which they measure their managers. Delinquencies can be viewed as either management problems or system problems. Many methods to lower delinquency rates exist.

These methods include:

- o better surveillance over contractors
- o more realistic delivery schedules
- o extensions of the delivery schedules to remove the delinquencies and make the contracts current.

An extension of the delivery schedule (usually for some form of consideration) is the easiest and most common approach to remove a delinquency. However, this approach obliterates the originally established delivery date and thereby reduces the validity of the data for historical recordkeeping purposes. As currently structured, the delivery data in CCSS cannot be used as a delivery compliance measurement tool.

3. Legal Considerations.

On the issue of delivery schedules the law is rather complex. Generally, if the Government allows a contractor to miss a scheduled delivery date and takes no action within a reasonable period of time, the Government has effectively waived the delivery schedule and loses its right to terminate for default. In order to retain its right to terminate for default the Government must either establish a new delivery date or issue a forbearance notification. Forbearance essentially means that during a Government decision making period, the contract will not be terminated nor will the delivery schedule be revised. Due to legal complexities, a prolonged forbearance

current. If a delivery date has passed and items have not been delivered, the the contract is delinquent. Information in the system is retained for twentyfour (24) months after the last hardware delivery.

If a scheduled delivery date is changed, the data can be misleading in terms of measuring adherence to delivery schedules. Reasons for revising delivery dates will be explained later. However, for now, it is sufficient to note that it is not uncommon for delivery schedules to be renegotiated. While some schedule changes are fully justified, other adjustments are made for administrative reasons. The manner in which CCSS deals with changes requires the revised delivery date to replace the originally established delivery date. This means that the system no longer recognizes the original delivery date. A delinquent contract would then become current and any record of the delinquency would be abolished. It must be noted that this system was not designed to keep historical delivery records but to monitor deliveries.

Historical records that accurately reflect the originally scheduled delivery date and the actual delivery date could be extracted from CCSS if delivery dates were never changed. However, valid changes in performance requirements and certain current policy and legal considerations may require that delivery schedules sometimes be revised. Changes in delivery schedules due to policy and legal considerations will be discussed in the following paragraphs.

2. Policy Considerations.

Managing delinquency rates (measured by dividing the number of total open contracts by the number of delinquent contracts) is a concern of both purchasing and administrative offices. It has been observed that the Defense

The QDR system suits the purpose for which it was designed, but it does not accurately measure quality of performance. The present structure of the QDR system does not allow distinctions to be made between the following conditions.

Poor quality in critical item

Item does not conform to specifications

Item must be replaced

Contractor uncooperative

Entire contract quantity poor

Poor quality in non-critical item

Item conforms to bad specifications

Item can be reworked

Contractor reworks/replaces at no cost

Problem with small percentage

C. DELIVERY.

1. Background.

Attempting to differentiate between good and bad producers on the basis of product quality alone may not adequately reflect a contractor's overall performance. It is necessary to consider a contractor's history of meeting scheduled deliveries. A high quality product delivered one year late can sometimes prove to be less valuable than a fair quality product delivered on time.

Contract delivery data is retained in the Commodity Command Standard System (CCSS) files. On the surface, the workings of the system appear to be quite simple. Once a contract is awarded, the established delivery date and contract identification data (contractor, NSN, quantity, etc.) are entered into CCSS. CCSS periodically produces varied reports concerning deliveries; however, all the reports show contracts in either a current or delinquent delivery status. If the delivery date has not yet arrived, a contract is

A) were discovered to be defective by each of the five different users and, therefore, resulted in the submission of five QDR's. If contractor quality ratings were based on the number of QDR's, the condition given in the above example, e.g., one contractor - five defective items, could result in Contractor B having five QDR's and Contractor A having one.

Since the QDR system was developed for reasons other than measuring the quality of a contractor's performance, it is not and cannot become an accurate measurement tool. Even if the inequities caused by simply counting the number of QDR's were resolved it would be necessary to categorize deficiencies according to importance. Presently, the QDR system identifies deficiencies as Category I and II, but for accurate performance measurement purposes the necessary distinctions are not truly made. Category I deficiencies can cause death, injury, serious damage to weapons systems or impair readiness. All other deficiencies are Category II. If using the QDR system to measure performance history, a deficiency in an inexpensive piece of machined metal would have an equal weight to a deficiency in a very expensive complex piece of electronics although both may be considered Category II deficiencies under the QDR system. Another problem inherent to using the QDR system as an accurate measurement of performance is the notion of responsibility for the defective item. If an item doesn't work a QDR is filed; and even if it is later discovered that the defect was due to poor Government specifications, the contractor is still charged, per the data system, with a QDR. When this study began, the QDR system did not note responsibility for defects, but AMC QA representatives stated that responsibility data would soon be included in the system.

also be used as means of measurement. For purposes of this report, attention is focused on the quality of accepted goods and the systems that measure that quality.

To accurately measure a contractor's performance in terms of product quality a system must, as a minimum, perform the following functions:

- o Identify percentage of defective material in relation to quantity delivered.
- o Place responsibility if possible
- o Rate the cost in both direct and indirect terms
- o Rate the criticality of the defect
- o Assess any corrective action taken by contractor

Without a system that considers these features, a contractor's performance cannot be adequately measured. A method currently used by AMC Quality Assurance to measure the quality of a firm's performance is to total the number of Quality Deficiency Reports (QDR's) attributable to that firm. QDR's, as the name implies, are reports on items that appear (normally to a field user) to be defective. The purpose of the QDR system is to identify defective material and take corrective action. Actions could include removing the material from Government stocks, attempting to get a contractor to rework/replace defective items, or possibly revising inaccurate Government specifications.

A QDR is normally filed by a field user. If an item does not work properly or does not fit properly a QDR should be submitted. One user may discover five defective items from Contractor A and submit one QDR citing those five items. Also, under the QDR system, it is possible that five items furnished by Contractor B (identical to those furnished by Contractor

the Individual Contract Abstract shows the delivery status of current contracts. These ADP products are generated either when there is any change or activity on the contract (e.g., modifications, deliveries) or when specifically requested. The Individual Contract Abstract data is monitored and input by the Industrial Specialist (IS). Therefore, the IS is in a position to report on the current delivery status of any contract (contractor) for which he is responsible. When all deliveries are complete and the contract is closed out, the data on the Individual Contract Abstract is input to the PSCR.

2. Uses of Data.

a. Formal Pre-Award Survey.

Within the context of this project's concern with contractor past performance histories, this data is primarily used by the DCASMA Pre-Award Monitor. He needs all that information when responding to buying offices' informal and formal requests for Pre-Award Surveys (PAS). An informal request would normally be a telephone call inquiring about the contractor. In response to such a call the Pre-Award Monitor performs the following (if the contractor has any history with DCAS):

- (1) The PSCR is reviewed and the requestor is notified of the contractor's delivery history including delinquencies and reasons for them.

- (2) If the PSCR data indicates further inquiry is necessary, the Pre-Award Monitor contacts the responsible Industrial Specialist for a report on the status of current contracts.

- (3) Past surveys are reviewed and relevant information is relayed to the requestor.

(4) A review of the problem contractors participating in the Contractor Improvement Program (CIP) is conducted. An overview of the CIP can be found in c. below and operating details of the Baltimore, DCASMA CIP are listed in 3. below.

b. Informal Pre-Award Survey.

If the data reviewed indicates a potential for problems, the Pre-Award Monitor will suggest to the buying office that a formal PAS be performed. Also, if a contractor is in the CIP, a formal PAS will be suggested. If, however, the data indicates little potential for problems, the buying office can use the information gained in the informal PAS to make an affirmative responsibility determination.

A formal PAS may result in an unsatisfactory rating in the "Performance Record" section of the Survey. One such PAS observed presented statistical data that indicated a high delinquency rate. That PAS stated that the contractor had not successfully taken corrective action. The Performance Record section concluded,

"Analysis and evaluation of the offeror's performance shows an unacceptably high rate of delinquency. Therefore, this factor is rated unsatisfactory. Offeror is presently monitored under the Contractor Improvement Program."

At the conclusion of the Production Part of the PAS, DCASMA stated

"...no award is recommended."

c. Contractor Improvement Program (CIP).

(1) The DCAS CIP is essentially an internal DCAS program that identifies problem contractors (only those over which DCAS has cognizance).

Through a DCAS team approach, internal contractor operating systems (e.g. quality, purchasing, etc.) are examined in an attempt to identify and correct problems. The CIP is not publicized nor are lists of problem contractors published. The CIP allows DCAS to manage their resources more efficiently by putting emphasis on the contractor rather than on individual contracts. In order for a contractor to be entered into the CIP a history of problems must exist. To be released from the program an improvement trend must be noted. It is believed that each DCASMA runs its own CIP.

(2) The information presented in paragraph c. above is applicable to the CIP implemented by all DCASMA's. Specifics of the program as run by DCASMA Baltimore follow. However, it must be remembered that these specifics may or may not apply to the CIP as implemented by other DCASMA's.

(3) DCASMA Baltimore CIP.

(a) Before a contractor goes into the CIP run by the Baltimore DCASMA, the IS who normally performs routine surveillance begins to get a "feel" that the contractor in question may be having problems. The IS then performs more intensive surveillance while informally reporting to his Branch Chief. If problems continue, the contractor is considered for entry into the CIP.

(b) Because it is widely believed that delinquencies are indicators of problems, this DCASMA uses a guideline of a 25% delinquency rate for contractors to determine entry into their CIP. The 25% rate is only a guideline and it is flexible.

(c) When a contractor is formally entered into the CIP it becomes the concern of the Industrial Specialist's Branch Chief. The CEO of

the company is notified as are buying activities that have contracts with the contractor. When informal requests for PAS are received it is recommended that a full PAS be performed before making any additional awards to CIP contractors. The IS performs physical surveillance on a biweekly basis. Monthly reviews of CIP contractors' progress are held with the DCASMA Commander.

(d) If after three months the CIP contractor does not show an improvement, concern for that contractor is elevated from the Branch Chief to Division Chief. The DCASMA Division Chief then visits the plant to hold discussions with his counterpart, often a vice president of the company. Biweekly surveillance by the IS continues.

(e) If, after three months at Division level the problem still persists, it is elevated to the local commander for a meeting with his direct counterpart in the company, usually the president or CEO. As yet it has not been necessary to elevate problems any further than the local commander.

(f) The Baltimore DCASMA releases a contractor from CIP when he shows an improvement trend. Some contractors have been in this program continuously since its inception in 1981.

C. DARCOM MSC PROCUREMENT DIRECTORATES.

1. AMCCOM.

AMCCOM has no formal or informal systems other than data kept by individual buyers primarily for their personal use. Buyers coordinate directly with DCASMA when inquiring about the necessity for a PAS.

2. CECOM.

CECOM has a small unit in the Procurement Directorate that serves

as a coordinator between the PCO and DCAS for PAS's. They maintain past PAS's. A review of past PAS's and a telephone call to the DCASMA Pre-Award Monitor (informal PAS) result in a recommendation to the PCO which suggests a formal PAS be either waived or required.

Additionally, contractor delivery performance records are maintained on critical items. These records are used to identify problem producers or problem items for either more extensive surveillance and/or award process consideration.

3. MICOM.

MICOM utilizes a Pre-Award Manager whose main function, as relates to past performance, is to analyze available data and recommend (to the PCO) whether a formal PAS be waived or required.

The data consulted primarily consists of past PAS's. Additionally, DCAS generated notifications of problem contractors are reviewed. Also, Quality Deficiency Report (QDR) data is examined and if problems are indicated, the Pre-Award Manager consults with cognizant MICOM Quality Assurance personnel for further input.

4. TACOM.

TACOM maintains and uses two sets of historical data. One set is a history of the item for the purposes of gathering information on production problems and for gauging production lead times.

The other set of historical data is the quarterly issued list of Contractors Requiring Special Attention. This list is based upon delinquencies for the previous six months, QDR's and any special problems. For purposes of the list, delinquencies are based upon the originally scheduled delivery date unless a delay was due to the fault of the Government.

Buyers are furnished this list with the recommendation they not solicit contractors for small purchases (under \$25,000). For larger purchases it is recommended that award be withheld from large businesses, and it is recommended that a formal PAS be performed before any contract award to small businesses. Most of the data is drawn from various Commodity Command Standard System (CCSS) Production Reports. Also close TACOM coordination with selected DCASMA's add to the available data.

5. TSARCOM.

TSARCOM uses a Monthly Delinquency Report to identify problem contractors. The report is strictly based on delinquencies. Past performance must be considered and formal PAS's are required before award of new contracts to firms listed on the Monthly Delinquency Report. If deemed necessary, coordination with DCAS is affected to attempt corrective action.

D. SUMMARY.

The data provided by DCAS Pre-Award Surveys appear to satisfy AMC's needs for contractor past performance history insofar as determining whether a prospective contractor can be deemed responsible. If a firm's past performance records indicate a history of problems, those records can be used to support a non-responsibility determination. Even though record keeping methods that exist at AMC MSC's are used mainly as screening devices to determine the necessity of a PAS, that data can also be used to supplement PAS data. Potential use of the historical data is not confined to responsibility determinations alone. As indicated under SYSTEM USE in Chapter II, the data may highlight the need for additional government surveillance or other contractual controls when a contract is of necessity awarded to a firm

with a history of performance problems. This usage is submitted to be of equal importance to responsibility determinations.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS.

1. Feasibility of Establishing a Contractor Performance History System.

The research revealed that a AMC Contractor Performance History System is feasible if it is patterned after the NAVSEA system. The responsibility for implementation properly rests with the AMC Quality Assurance and Test Directorate. Implementation will require refinement of the quality data systems maintained by the QA elements at AMC MSC's. As the report pointed out, the current MSC QA systems are designed for internal QA management and not for keeping records on contractors for the purpose of determining suitability for future awards. By refining the MSC QA systems through adapting the NAVSEA system, it will be possible to identify historically poor producers using comparative analysis methods. Then a Vendor Data Analysis Report (VDAR) type list can be provided to contracting elements to use as a tool in selecting the best qualified contractors.

2. DCAS and AMC MSC Procurement Directorates.

While the VDAR type system would be useful over the long term, the current systems employed by DCAS and the MSC Procurement Directorates do provide data to contracting officials that can be used in making supportable responsibility determinations. From a contract award perspective, the performance history data currently available meets the needs of the Army. The information in Chapter V indicates that if, in fact, contract awards are being made to firms which have histories of late deliveries and/or poor quality products, it is not necessarily due to an absence of adequate historical

data. It could be due to other reasons; such as non-use of the data, single sources of supply or regulatory requirements that impede independent DOD decision making. Finally, it must be recognized that this information can also be used to determine the degree of surveillance necessary during contract performance.

B. PENDING ACTIONS.

Partial findings of this research (excluding Chapter V material) were presented to the Director of the AMC Quality Assurance and Test Directorate and his staff during an in-process review held 30 September 1983. The Director accepted the conclusion that AMC adaptation of the NAVSEA system is feasible and also acknowledged that system development was properly the responsibility of Quality Assurance. As a result of the in-process review, the Director is considering the following actions:

- o Revising the AMC Depot Performance System to be more in line with the NAVSEA receipt inspection system. In support of their intended action, the following information was provided by the AMC Quality Assurance and Test Directorate:

"...Because there are basic concept similarities between the Depot Performance System and the information on receipt inspection which is accomplished by NAVSEA, it is possible that the Depot System could be expanded and collected from all depots into a central Data Bank to be used to develop a quality history system. It is also possible that a system could be developed using the type of information gathered by TSARCOM/AMCCOM using a comparative analysis method."

- o Revising the TSARCOM and AMCCOM contractor performance history system to place attention on poor quality producers and to allocate internal QA resources more effectively.

C. RECOMMENDATIONS.

The findings of this research do not suggest a need for any further

actions at this time other than those under consideration by the AMC Quality Assurance and Test Directorate. Revisions of the AMC Depot Performance System and the contractor quality history systems currently in use at AMCCOM and TSARCOM should allow comparative analysis methods to be used to identify poor producers from a quality perspective. At that time coordination with AMC contracting elements should be effected and development of VDAR type lists could begin. Then the detailed quality history data should be combined with the DCAS information bases to aid in responsibility determinations.

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER APRO 83-09	2. GOVT ACCESSION NO. AD-A157142	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) FEASIBILITY OF A DARCOM CONTRACTOR PERFORMANCE HISTORY SYSTEM		5. TYPE OF REPORT & PERIOD COVERED Final
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Arthur J. Mandler		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS Office of the Deputy Chief of Staff for Logistics ATTN: DALO-PRO Fort Lee, VA		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS HQ Army Materiel Command ATTN: AMCPP-S 5001 Eisenhower Ave., Alexandria, VA 22333		12. REPORT DATE May 1985
		13. NUMBER OF PAGES 35
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Contractor Performance Poor performers Late deliveries Performance history Measurement tools		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Within the field of defense acquisition it has long been recognized that contracts are sometimes awarded to firms which have histories of poor quality products or late deliveries. It has been hypothesized that the recognized problem is largely due to the absence of contractor performance history systems which could assist decision makers in selecting better qualified contractors. The main objective of this effort was to determine the feasibility of developing and utilizing a DARCOM Contractor Performance History System as a possible		

DD

FORM 1 JAN 79

1473

EDITION OF 1 NOV 65 IS OBSOLETE

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

20. solution to the problem.

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

END

FILMED

9-85

DTIC